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WHAT IS CLAIMED AS NEW AND IS DESIRED TO BE SECURED BY LETTERS OF THE UNITED STATES IS:

In a liquid drystal display element comprising a front side substrate having a front side electrode, a rear side substrate having a rear side electrode and a liquid crystal layer interposed therebetween wherein the liquid crystal layer exhibits a plurality of display states; a display state is changed by a voltage applied across the electrodes, and at least one state among the display states is maintained stably, the liquid crystal 10 display element being characterized in that at least a part of the front side electrode and the front side substrate is transparent; the front side electrode or the rear side electrode is divided into a plurality of electrode regions on its substrate surface, and the 15 maximum space a (µm) between adjacent electrode regions and the thickness d (um) of the liquid crystal layer satisfy a relational formula of $1.0 \cdot d \le a \le 4.0 \cdot d$.

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2. In a liquid crystal display element comprising a front side substrate having a front side electrode, a rear side substrate having a rear side electrode and a liquid crystal layer interposed therebetween wherein the liquid crystal layer exhibits a plurality of display states; a display state is changed by a voltage applied across the electrodes, and at least one state among the display states is maintained stably, the liquid crystal display element being characterized in that at least a

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part of the front side electrode and the front side substrate is transparent; the front side electrode or the rear side electrode is divided into a plurality of electrode regions on its substrate surface; a chiral nematic liquid crystal is used for the liquid crystal layer; the maximum space a (μ m) between adjacent electrode regions, the thickness d (μ m) of the liquid crystal layer, and the maximum effective voltage $V_{max}(V)$ of a voltage applied to the front side electrode and the rear side electrode satisfy a relational formula of 1.0 $d \leq a \leq d \cdot V_{max}/10$.

- 3. The liquid crystal display element according to Claim
- 2, wherein V_{max} is 48 V or less and 2.5 μ m \leq d \leq 6.0 μ m.
- 4. The liquid crystal display element according to Claim
- 2, wherein at least a part of the front side electrode comprises a plurality of segment electrodes, and the rear side electrode is a single common electrode arranged so as to correspond to all the segment electrodes, or the rear side electrode is a plurality of common electrodes arranged so as to correspond to each plurality of segment electrodes.
 - 5. The liquid crystal display element according to Claim 2, wherein at least a part of the front side electrode is stripe-like electrodes and at least a part of the rear electrode is stripe-like electrodes, said stripe-like electrodes of the front side electrode and the rear side electrode being arranged so as to be crossed in the

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substrate plane.

- 6. The liquid crystal display element according to Claim 5, wherein the disposition density L_d (number/mm) of the stripe-like electrodes is $2 \le L_d \le 15$.
- 7. The liquid crystal display element according to Claim 4, wherein the rear side electrode is a reflective electrode.
 - 8. The liquid crystal display element according to Claim 5 wherein the rear side electrode is a reflective electrode.
 - 9. The liquid crystal display element according to Claim 2 wherein a voltage pulse having a pulse width T (ms) of 10 ms \leq T \leq 1000 is applied to the liquid crystal layer.
 - 10. A liquid crystal display apparatus characterized in that the liquid crystal display element described in Claim 2 is used; a segment display and/or a dot matrix display is carried out, and figures and characters are displayed.
- 11. The liquid crystal display apparatus according to
 20 Claim 10, which is used for a public display apparatus.
 12. The liquid crystal display apparatus according to
 Claim 11, wherein a price of an article and/or time is
 displayed.
- 13. The liquid crystal display apparatus according to 25 Claim 10, which is used for a display apparatus for a vehicle.
 - 14. The liquid crystal display apparatus according to

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Claim 13, wherein a speed of a vehicle and/or time is displayed.

15 ~ In a liquid crystal display element comprising a front side substrate having a front side electrode, a rear side substrate having a rear side electrode and a liquid crystal layer interposed therebetween wherein the liquid crystal layer exhibits a plurality of display states; a display state is changed by a voltage applied across the electrodes, and at least one state among the display states is maintained stably, the liquid crystal display element being characterized in that at least a part of the front side electrode and the front side substrate is transparent; the front side electrode or the rear side electrode is divided into a plurality of electrode regions on its substrate surface; an antiferroelectric liquid crystal is used for the liquid crystal layer, and the maximum space a (µm) between adjacent electrode regions, the thickness d (µm) of the liquid crystal layer, and the maximum voltage V_{OP} (V) of a voltage applied to the front side electrode and the rear side electrode satisfy a relational formula of 1.0. $d \le a \le d \cdot V_{OP} / 40$.

- 16. The liquid crystal display element according to Claim 15, wherein V_{OP} is 120 V or less and $0.5\mu m \le d \le 6.0\mu m$.
- 17. The liquid crystal display element according to Claim
 15, wherein at least a part of the front side electrode
 comprises a plurality of segment electrodes, and the rear

side electrode is a common electrode arranged so as to correspond to all the segment electrodes, or the rear side electrode is a common electrode arranged so as to correspond to each plurality of segment electrodes.

- 18. The liquid crystal display element according to Claim
 15, wherein at least a part of the front side electrode
 is stripe-like electrodes and at least a part of the rear
 electrode is stripe-like electrodes, said stripe-like
 electrodes of the front side electrode and the rear side
 electrode being arranged so as to be crossed in the
 substrate plane to effect a dot matrix display.
 - 19. The liquid crystal display element according to Claim 17, wherein the rear side electrode is a reflective electrode.
- 15 20. The liquid crystal display element according to Claim 18, wherein the rear side electrode is a reflective electrode.
- 21. A liquid crystal display apparatus wherein the liquid crystal display element described in Claim 15 is used for a display apparatus of a vehicle.